

CLAIMS

1. A building element comprising:

5 a glass panel defining an outer circumferential rim including at least two rectilinear segments, a first one of which defines a first length and a second one of which defines a second length, said glass panel having a specific coefficient of thermal expansion,

a first pultruded element having a length corresponding to said first length,

10 a second pultruded element having a length corresponding to said second length,

said first and second pultruded elements being adhered in a high strength integral adhesion to said hardened glass panel along said first and second rectilinear segments, respectively, and

15 said pultruded elements having a content of reinforcing fibres for providing a coefficient of thermal expansion of said pultruded elements substantially corresponding to said specific coefficient of thermal expansion.

2. The building element according to claim 1, said fibres being glass fibres.

20 3. The building element according to any of the claims 1 or 2, said glass panel being a self supporting glass panel, a glass panel made from laminated or hardened glass or a combination thereof.

25 4. The building element according to any of the claims 1-3, the difference between the coefficient of thermal expansion of said pultruded elements and said specific coefficient of thermal expansion being less than 40%, such as 10% - 40%, e.g. 20%, preferably approximately 5% - 10%, 10% - 15%, 15% - 20%, 20% - 25%, 25% - 30%, 30% - 35% or 35% - 40%.

30 5. The building element according to any of the claims 1-4, the content of fibres of said pultruded elements being more than 40%, such as 40% - 50%, 50% - 60%,

60% - 70%, 70% - 80%, 80% - 90%, 90% - 95%, preferably 50% - 80% such as 60% - 70%, all percentages by weight.

5 6. The building element according to any of the claims 1-5, said first and second pultruded elements being adhered to said glass panel by means of a PU adhesive or alternatively and preferably an epoxy adhesive.

10 7. The building element according to any of the claims 1-6, said glass panel being a rectangular panel and said first and second rectilinear segments constituting the opposite longer sides of said rectangular glass panel.

15 8. The building element according to claim 7, further comprising two additional pultruded elements made from the same materials and having the same reinforcing glass fibre content as said first and second pultruded elements and being adhered to the short sides of said rectangular glass panel.

20 9. The building element according to any of the claims 1-8, further comprising a further glass panel positioned in space apart relationship relative to said glass panel by means of distance elements for providing a glazed window.

10. The building element according to claims 8 and 9, said distance elements being constituted by extensions of said pultruded elements.

25 11. The building element according to claim 10, said integral distance element further including or supporting a vapour absorbing substance such as a silica gel or a PU foam.

30 12. The building element according to claims 10 or 11, further including a gas tight foil such as an aluminium foil or stainless steel foil for gas tight sealing, the inner space defined between said glass panels.

13. The building element according to claim 12, said gas tight foil being integrally included within said distance elements in an integral pultrusion or pultrusion/extrusion process.

5 14. A building structure having a facade or a part of a facade made from a plurality of building elements each having any of the features of the building element according to any of the claims 1-13 and being assembled into a composite multi-element structure including elements extending horizontally and elements extending vertically.

10 15. A method of producing a building element comprising:

providing a glass panel defining an outer circumferential rim including at least two rectilinear segments, a first one of which defines a first length and a second one of which defines a second length, said glass panel having a specific coefficient of thermal expansion,

15 providing a first pultruded element having a length corresponding to said first length,

providing a second pultruded element having a length corresponding to said second length, said pultruded elements having a content of reinforcing fibres for providing a coefficient of thermal expansion of said pultruded elements substantially corresponding to said specific coefficient of thermal expansion, and

20 adhering said hardened glass panel to said first and second pultruded elements in a high strength integral adhesion along said first and second rectilinear segments, respectively.

25 16. The method according to claim 15, said fibres being glass fibres.

17. The method according to any of the claims 15 or 16, said glass panel being a self supporting glass panel, a glass panel made from laminated or hardened glass or a combination thereof.

18. The method according to any of the claims 15-17, the building element further having any of the features of the building element according to any of the claims 4-13.

- 5 19. A method of producing a building structure having a facade or a part of a facade made from a plurality of building elements each being produced in accordance with the method according to any of the claims 15-18 and having any of the features of the building element according to any of the claims 1-13 and being assembled into a composite multi-element structure including elements extending horizontally and
10 elements extending vertically.